

REMARKS

Summary of the Office Action

Claims 1-19 are considered in the Office action.

Claims 1-2 and 11-12 have been rejected under 35 U.S.C. § 102(b) as anticipated by Miyakawa et al. U.S. Patent No. 4,974,098 (“Miyakawa”).

Claims 3 and 13 have been rejected under 35 U.S.C. § 103(a) as obvious over Miyakawa in view of Falk U.S. Patent No. 6,141,120 (“Falk”).

Claims 4-5 and 14-15 have been rejected under 35 U.S.C. § 103(a) as obvious over Miyakawa in view of Bryant U.S. Patent No. 6,462,772 (“Bryant”).

Claims 6-7 and 16-17 have been rejected under 35 U.S.C. § 103(a) as obvious over Miyakawa in view of Horowitz et al U.S. Patent No. 4,525,071 (“Horowitz”) and Gray et al U.S. Patent No. 6,028,681 (“Gray”).

Claims 8-9 and 18-19 have been rejected under 35 U.S.C. § 103(a) as obvious over Miyakawa in view of Gray.

Claim 10 has been rejected under 35 U.S.C. § 103(a) as obvious over Miyakawa in view of Horowitz and Ryu U.S. Patent No. 6,295,386.

Summary of the Reply

Applicant has amended claims 1 and 11 to more particularly describe and distinctly claim the invention.

Reply to Rejections Under 35 U.S.C. § 102(b)

The claimed invention recites methods for automatically calibrating a scanner, the methods including affixing a calibration target to a scanning surface of the scanner, and selectively calibrating the scanner with the calibration target during a normal scan. The claimed invention also recites apparatus for automatically calibrating a scanner, the apparatus comprising a calibration target, means for attaching the calibration target proximate to a scanning surface of the scanner, and means for selectively calibrating the scanner with the calibration target during a normal scan. The cited references do not describe or suggest the claimed invention.

Instead, Miyakawa describes an embodiment of an image reading device that includes a glass original plate 20 including an original placement region 21 and strips of black regions 22 and 23 of non-transparent type on both sides of original placement region. (Col. 1, lines 10-11; Col. 3, lines 24-30; FIG. 4). An original is placed on glass original plate 20, and a linear sensor 10 scans the original while the original is transported in the direction N. (Col. 1, lines 11-20; Col. 3, lines 35-40). Linear sensor 10 includes dark-time output regions 12 and 13 located on either side of an effective output region 11. (Col. 1, lines 38-43; FIG. 2).

Dark-time output regions 12 and 13 include pixels that include light-blocking members coated over light receiving surfaces. (Col. 1, lines 38-43). Dark-time output regions 12 and 13 provide reference signals to indicate the sensor signal level (referred to as “dark-time level”) when the light in effective output region 11 is blocked. (Col. 1, lines 43-51). Light from black regions 22 and 23 constantly enters dark-time output regions 12 and 13 when linear sensor 10 reads an original placed on glass original plate 20. (Col. 3, lines 35-40). This prevents light level fluctuations in and stabilizes the dark-time level of dark-time output regions 12 and 13. (Col. 3, lines 41-46).

Unlike the claimed invention, however, Miyakawa does not describe or suggest methods or apparatus that selectively calibrate a scanner with a calibration target during a normal scan. Instead, because light from black regions 22 and 23 constantly enters dark-time output regions 12 and 13 when linear sensor 10 reads an original placed on glass original plate 20, the Miyakawa system provides no such selectivity. Further, the Miyakawa system seemingly cannot provide such selectivity, otherwise the system would suffer from deteriorated image quality. As a result, Miyakawa actually points away from the claimed invention.

Similarly, none of the other cited references describe or suggest methods or apparatus that selectively calibrate a scanner with a calibration target during a normal scan. Because the cited references do not describe or suggest the claimed invention, applicant respectfully requests that the § 102(b) rejections of independent claims 1 and 11 be withdrawn. Because all other claims depend from claims 1 and 11, applicant respectfully requests that the § 103(a) rejections of claims 1-19 be withdrawn.

- Conclusion

For the reasons stated above, applicant submits that this application, including claims 1-19, is allowable. Applicant therefore respectfully requests that the Examiner allow this application.

Respectfully submitted,



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